

Selected Summaries

Bacteremia with Urinary Tract Infections

[Bachur R, Caputo GL. *Bacteremia and meningitis among infants with urinary tract infections. Pediatr Emerg Care 1995,11: 280-284.*]

The authors from children's Hospital, Harvard Medical School, Boston, analyzed data on 354 inpatients <2 years of age with urinary tract infections (UTIs) to characterize patients with associated bacteremia or meningitis, and objective predictors of these complications. Bacteremia was identified in 33 (9.3%) patients (*E. coli* - 25, *S. aureus* - 4, Group-B streptococcus - 2, *Enterobacter* and *Enterococcus sp* -1 each) and meningitis in 4 (1.1%) patients. Bacteremia was limited to those below 6 months. The frequency of bacteremia was 21% for <1 months, 13% for 1.1-2.0 months and 7% for 3.1-6.0 months. All bacteremias except one, after 1 month of age were with *E. coli*. No clinically useful laboratory parameters could be identified to discriminate bacteremic and non-bacteremic patients. Total white blood cell counts, initial temperature, initial serum bicarbonate and erythrocyte sedimentation rate were not significantly different between bacteremic and non-bacteremic patients. The difference in total band cell count, percentage band cells and band-neutrophil ratio, though statistically significant, were of no practical value.

Comments

The decision to treat a child with UTI as

an inpatient versus an outpatient, and with parenteral versus oral antibiotics is presumably based on illness severity, concern for renal scarring, and risk of bacteremia, sepsis and meningitis. The risk of bacteremia with UTI has been reported previously (1) but profile of patients with associated bacteremia has not been well characterized. The authors, therefore, analyzed a large population of infants with UTI. Their observation that bacteremia in association with UTIs occurred up to six months of age only is of practical significance. Like the previous studies(1,2) they also did not find any correlation between positive blood cultures and fever, WBC count or radiologic abnormalities. This emphasizes inaccuracy of relying on signs and symptoms and need for proper urine and blood culture in young infants suspected of UTI. Young infants <6 months with UTI should preferably be managed as inpatients with parenteral antibiotics.

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REFERENCES

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2. Ginsburg GM, McCracken GH. Urinary tract infections in young infants. *Pediatrics* 1982, 69: 409-411.